

CLEAN COPY OF PREVIOUSLY-EXISTING CLAIMS:

1. A modified breathing apparatus for medicating an air stream, said modified breathing apparatus comprising:
 - 5 a breathing apparatus comprising one of a regulator suitable for delivering air from a source of compressed air, the regulator adapted for use in scuba gear, aircraft applications, gas masks, hazardous environments, mountaineering, power assisted respirators and other similar applications, a snorkel or part thereof, a rebreathing device or a self-contained breathing
 - 10 apparatus;
a medication chamber adapted to store and discharge a therapeutic agent;
a delivery pathway between the chamber and an intake air pathway of the breathing apparatus; and
releasing means for selectively discharging the therapeutic agent from the
 - 15 chamber into the intake air pathway through the delivery pathway.
2. The modified breathing apparatus of claim 1 wherein the breathing apparatus is a second stage regulator for scuba diving.
- 20 3. The modified breathing apparatus of claim 1 wherein the breathing apparatus is a snorkel or part thereof.
4. The modified breathing apparatus of claim 1 wherein the breathing apparatus is a self-contained breathing apparatus ("SCBA") suitable for use in
- 25 firefighting and rescue, industry, shipping, mining, mountaineering, hazardous environment, aircraft and/or conditions of higher or lower atmospheric pressure.
5. The modified breathing apparatus of claim 1 wherein the medication chamber is sealed to resist entry of water, mud, dust or other contaminants.
- 30 6. The modified breathing apparatus of claim 5, wherein the therapeutic agent is housed in a container, said container adapted to locate in the medication

chamber.

7. The modified breathing apparatus of claim 1 wherein the medication chamber is formed integrally with the breathing apparatus.

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8. The modified breathing apparatus of claim 1 wherein the medication chamber is formed for releasable engagement with the breathing apparatus.

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9. The modified breathing apparatus of claim 2 further comprising balance means for substantially equalising pressure in the chamber with ambient pressure.

10. The modified breathing apparatus of claim 6 wherein the container for housing the therapeutic agent is a pressurised canister.

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11. The modified breathing apparatus of claim 10 wherein the pressurised canister has a release valve which is pressure activated to discharge the therapeutic agent.

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12. The modified breathing apparatus of claim 1 wherein the therapeutic agent is one or more of albuterol, salbutamol, adrenaline, beconase or glucose.

13. The modified breathing apparatus of claim 6 wherein the container comprises a capsule, a vial, a gelatine capsule or a blister pack.

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14. The modified breathing apparatus of claim 1 wherein the delivery pathway is formed by the chamber being disposed along the intake airway or pathway.

15. The modified breathing apparatus of claim 1 wherein the delivery pathway is a bore, channel or aperture.

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16. The modified breathing apparatus of claim 15 wherein the delivery pathway is a detour pathway adapted to direct some or all of the intake air through the

chamber.

17. The modified breathing apparatus of claim 15 wherein the delivery pathway includes valve means operable to open and close the bore, channel or aperture.

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18. The modified breathing apparatus of claim 17 wherein the valve means is a slide lock.

19. The modified breathing apparatus of claim 18 wherein the slide lock includes locking means to prevent unintentional activation.

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20. The modified breathing apparatus of claim 19 wherein the locking means is a locking nut.

21. The modified breathing apparatus of claim 16 wherein the delivery pathway is formed by two or more separate pathways between the chamber and the intake air pathway.

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22. The modified breathing apparatus of claim 10 wherein the releasing means comprises a rotatable dial or control for activating a displacement mechanism to displace the pressurised canister or a seat co-operating with the canister and thereby activate the release valve of the pressurised canister.

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23. The modified breathing apparatus of claim 22 wherein the displacement means is a cam operated slide positioned in the medication chamber.

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24. The modified breathing apparatus of claim 1 wherein a rotatable dial or control operates a mechanism to displace a measured amount of therapeutic agent and position it in the delivery pathway for discharge into the intake air pathway.

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25. The modified breathing apparatus of claim 10 wherein the releasing means

includes a pressure activated button for displacing the canister or a seat cooperating with the canister to discharge the therapeutic agent through a release valve of the pressurised container.

5 26. The modified breathing apparatus of claim 25 wherein displacement of the seat or canister clears one or more apertures to provide or open the delivery pathway.

10 27. The modified breathing apparatus of any one of claims 22, 24 or 25 wherein depression of a pressure activated button or rotation of a rotatable dial or control rotates a delivery chute into a discharge position from an inactive position.

15 28. The modified breathing apparatus of claim 27 wherein rotation of the delivery chute clears one or more apertures to provide the delivery pathway

29. The modified breathing apparatus of claim 1 further including counting means for indicating, at least approximately, the number of doses of therapeutic agent that have been discharged from the medication chamber.

20 30. The modified breathing apparatus of claim 29 wherein the counting means is formed as one or apertures in the chamber wall with moveable indicia visible therethrough, said moveable indicia providing an indication of either or both the number of dosages discharged from the chamber or the level of residual therapeutic agent in the chamber.

25 31. The modified breathing apparatus of claim 1 wherein a mouthpiece is formed to provide separation between the teeth of a user.

30 32. The modified breathing apparatus of claim 31 wherein the mouthpiece has an upper shield for receiving the upper teeth and a lower shield for receiving the lower teeth and an inlet aperture positioned between the upper and lower shields.

33. A medication chamber for use in medicating an air stream, the medication chamber comprising:
- an outer housing defining an internal chamber containing a therapeutic agent;
 - 5 mounting means for fixing the medication chamber to an air channelling device, said air channelling device comprising regulator adapted for use in scuba gear, aircraft applications, gas masks, hazardous environments, mountaineering, power assisted respirators and other similar applications, , a snorkel or part thereof, a rebreathing device or a self-contained breathing apparatus;
 - 10 at least one delivery path from the internal chamber externally and adapted to deliver the therapeutic agent to an air pathway in the air channelling device; and
 - releasing means for releasing the therapeutic agent from the internal chamber.
- 15 34. The medication chamber of claim 33 wherein the outer housing is formed of metal, plastic or polyvinyl chloride.
35. The medication chamber of claim 33 wherein the internal chamber is sealed to resist entry of water, mud, dust or other contaminants.
- 20 36. The medication chamber of claim 33 wherein the outer housing is formed as two interengageable sections.
37. The medication chamber of claim 36 wherein the two sections are screw threadably engageable.
- 25 38. The medication chamber of claim 33 wherein the therapeutic agent is any one of more of salbutamol, Beconase, adrenaline, aminophylline or glucose.
- 30 39. The medication chamber of claim 33 wherein the therapeutic agent is held in a pressurised container having a release valve, the pressurisable container locatable inside the outer housing.

40. The medication chamber of claim 33 wherein the mounting means comprises one or more recesses or slots for receiving a fixing or locating device such as a screw and/or a guide tab.
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41. The medication chamber of claim 33 wherein the at least one delivery path is an outlet channel in communication with the release valve of the pressurised container.
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42. The medication chamber of claim 39 wherein the releasing means includes a rotatable dial for activating a cammed mechanism to displace the canister and operate the release valve to thereby discharge a dose of therapeutic agent.
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43. The medication chamber of claim 42 wherein the cammed mechanism operates a slidable seat to activate the release valve of the pressurised canister.
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44. The medication chamber of claim 39 wherein the releasing means includes a pressure activated button for displacing the canister or the seat and activating the release valve.
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45. The medication chamber of claim 33 wherein the releasing means comprises a mechanism for delivering a powder to the air pathway.
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46. The medication chamber of claim 45 wherein the mechanism comprises a geared arrangement for advancing and opening a blister pack to present the powdered agent contained therein to the air pathway.
47. The medication chamber of claim 45 wherein the mechanism comprises a rotatable dispenser for dispensing a powdered agent to the air pathway.
48. The medication chamber of claim 45 wherein the mechanism further

comprises valve means operable to open or close the delivery pathway.

49. The medication chamber of claim 33, wherein the air stream is delivered to a user's mouth or nose.

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50. The medication chamber of claim 33 wherein the outer housing includes indicator means for indicating, at least approximately, the content status of the therapeutic agent in the internal chamber and/or the number of doses of therapeutic agent which have been dispensed.

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51. The medication chamber of claim 33 wherein the outer housing further comprises an inlet pathway for receiving a pressurised air supply into the chamber.

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52. The medication chamber of claim 51 wherein the outer housing further comprises an outlet valve for discharging air from the internal chamber when air pressure inside the chamber exceeds the pressure outside the chamber.

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53. The medication chamber of claim 33 wherein the outer housing is insulated to resist thermal fluctuations.

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54. A method of medicating an air stream in a breathing apparatus comprising a regulator suitable for delivering air from a source of compressed air, the regulator adapted for use in scuba gear, aircraft applications, gas masks, hazardous environments, mountaineering, power assisted respirators and other similar applications, a snorkel or part thereof, a rebreathing device or a self-contained breathing apparatus, the method comprising the steps of mounting a chamber containing a therapeutic agent to a breathing apparatus and introducing one or more doses of the therapeutic agent into an inlet pathway for inspiratory air.

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55. The method of claim 54 wherein mounting the chamber may comprise forming the chamber integrally with the breathing apparatus.

56. The method of claim 54 wherein mounting the chamber includes the step of forming a separate chamber and reversibly mounting it to the breathing apparatus.
57. The method of claim 54 further including the step of positioning a container
5 holding the therapeutic agent in the chamber.
58. The method of claim 57 wherein the container is a pressurised container.
59. The method of claim 54 wherein the step of introducing one or more doses
10 of the therapeutic agent may include the step of activating an agent releasing mechanism by depressing a button or rotating a control dial or knob.
60. The method of claim 54 wherein the step of introducing one or more doses
15 of the therapeutic agent into an inlet pathway may comprise the step of introducing the therapeutic agent directly into the inlet pathway from the chamber or through a delivery air pathway from the chamber to the inlet pathway.